

WHAT IS CLAIMED IS:

1. A twist drill for drilling, with a clamping ring (4) that surrounds the spiral fluted shaft portion (2) of the drill (1) on which said clamping ring (4) can be mounted in any axial adjustment position as a holder for a countersink drill or a countersink cutter body (5), where the clamping ring (4) is braced, by means of a locking screw (6) that penetrates it essentially radially, against the surfaces of the spiral flutes (9, 10) tunneled through by the clamping ring (4) or which form tunnels with and run through the clamping ring (4), and a clamping shoe (19, 20) is positioned between the locking screw (6) and the surface of a spiral flute (9, 10).
2. The twist drill as claimed in Claim 1, characterized by the fact that the clamping shoe (19, 20) projects in the direction toward the drill tip (11) with a chip deflection end (26) beyond the portion (26) of the clamping ring (4) that tunnels through or forms tunnels with the respective spiral flute (9, 10).
3. The twist drill as claimed in Claim 2, characterized by the fact that the chip deflection end of the clamping shoe (19, 20) overlaps at least the cross-section of the associated spiral flute (9, 10).

4. The twist drill as claimed in one of the Claims 1 to 3, characterized by the fact that the chip deflecting side (25) of the clamping shoe (19, 20) forms the flank of a spacer rib (28) acting relative to the clamping ring (4), which projects in the radial direction beyond the shaft (29) of the clamping shoe (19, 20) tunneled through by the clamping ring (4) or in the tunnels formed by the clamping ring (4).

5. The twist drill as claimed in any of the Claims 1 to 4, characterized by the fact that the chip deflecting surface (27) of the chip deflecting end (25) of the clamping shoe (19,20) forms an acute angle (31) with the bottom of the spiral flute (9, 10) which angle opens from the drill bit (11) toward the drill shaft (30).

6. The twist drill as claimed in Claim 5, characterized by the fact that the chip deflecting area (27) is essentially flat in its area positioned within the spiral flute (9, 10).

7. The twist drill as claimed in Claim 5 or 6, characterized by an increase (33) in the angular measurement (31, 32) on the side of the chip deflecting area (27) facing the clamping ring (4) which in the clamped position is positioned outside the spiral flute (9, 10).

8. The twist drill as claimed in Claim 7, characterized by a

bend-like (33) increase in the angular measurement;

the chip deflecting end (27') at its side facing the clamping ring (4) and projecting beyond the spiral flute (9, 10) and the counter-flank (37) of the spacer rib (28), forms an acute angle (35), which closes in the direction of rotation (34) of the drill;

the bearing surface (21, 22) of the clamping shoe (19) has a recess in the form of a ring segment on or in the associated spiral flute (9, 10) between its chip deflecting end (25) and its other end (2) and maintains a radial distance to the wall surface of the spiral flute (9, 10); and

one of: a pressure application surface (39) for the locking screw (6) that is provided in the surface of the clamping shoe (19, 20) that faces the engagement of the locking screw (6), and a depression, the diameter of which tapers in the direction of the pressure, in particular a conical depression (40), provided in the surface of the clamping shoe (19, 20) that faces the engagement of the locking screw (6).

9. Cutting-chamfering tool with a clamping ring (4) that surrounds the spiral fluted shaft portion (2) of a drill (1) on which said clamping ring (4) can be mounted in any axial adjustment position as a holder for a countersink drill or a countersink cutter

body (5), where the clamping ring (4) is braced, by means of a locking screw (6) that penetrates it essentially radially, against the surfaces of the spiral flutes (9, 10) tunneled through by the clamping ring (4) or which form tunnels with and run through the clamping ring (4), and a clamping shoe (19, 20) is positioned between the locking screw (6) and the surface of a spiral flute (9, 10).

10. Tool as claimed in Claim 9, characterized by the fact that the clamping shoe (19, 20) projects in the direction toward the drill tip (11) with a chip deflection end (26) beyond the portion (26) of the clamping ring (4) that tunnels through or forms tunnels with the respective spiral flute (9, 10).

11. Tool as claimed in Claim 10, characterized by the fact that the chip deflection end of the clamping shoe (19, 20) overlaps at least the cross-section of the associated spiral flute (9, 10).

12. Tool as claimed in one of the Claims 9 to 11, characterized by the fact that the chip deflecting side (25) of the clamping shoe (19, 20) forms the flank of a spacer rib (28) acting relative to the clamping ring (4), which projects in the radial direction beyond the shaft (29) of the clamping shoe (19, 20) tunneled through by the clamping ring (4) or in the tunnels formed by the clamping ring (4).

13. Tool as claimed in any of the Claims 9 to 12, characterized by the fact that the chip deflecting surface (27) of the chip deflecting end (25) of the clamping shoe (19,20) forms an acute angle (31) with the bottom of the spiral flute (9, 10) which angle opens from the drill bit (11) toward the drill shaft (30).

14. Tool as claimed in Claim 13, characterized by the fact that the chip deflecting area (27) is essentially flat in its area positioned within the spiral flute (9, 10).

15. Tool as claimed in Claim 13 or 14, characterized by an increase (33) in the angular measurement (31, 32) on the side of the chip deflecting area (27) facing the clamping ring (4) which in the clamped position is positioned outside the spiral flute (9, 10).

16. Tool as claimed in Claim 15, characterized by a bend-like (33) increase in the angular measurement.

17. Tool as claimed in one or more of the preceding claims, characterized by the fact that the chip deflecting end (27') at its side facing the clamping ring (4) and projecting beyond the spiral flute (9, 10) and the counter-flank (37) of the spacer rib (28), forms an acute angle (35), which closes in the direction of rotation (34) of the drill.

18. Tool as claimed in one of the Claims 9 to 16, characterized

by the fact that the bearing surface (21, 22) of the clamping shoe (19) has a recess in the form of a ring segment on or in the associated spiral flute (9, 10) between its chip deflecting end (25) and its other end (2) and maintains a radial distance to the wall surface of the spiral flute (9, 10).

19. Tool as claimed in one of the Claims 9 to 18 characterized by a pressure application surface (39) for the locking screw (6) that is provided in the surface of the clamping shoe (19, 20) that faces the engagement of the locking screw (6).

20. Tool as claimed in one of the Claims 9 to 18 characterized by a depression, the diameter of which tapers in the direction of the pressure, in particular a conical depression (40), provided in the surface of the clamping shoe (19, 20) that faces the engagement of the locking screw (6).